Title (en)

Improvements in or relating to micromechanical devices

Title (de)

Mikromechanische Vorrichtung

Title (fr)

Dispositif micromécanique

Publication

EP 0712022 A3 19961016 (EN)

Application

EP 95117915 A 19951114

Priority

US 33936394 A 19941114

Abstract (en)

[origin: EP0712022A2] An electrically addressable, integrated, monolithic, micromirror device (10) is formed by the utilization of sputtering techniques, including various metal and oxide layers, photoresists, liquid and plasma etching, plasma stripping and related techniques and materials. The device (10) includes a selectively electrostatically deflectable mass or mirror (12) of supported by one or more beams (18) formed by sputtering and selective etching. The beams (18) are improved by being constituted of an electrically conductive, intermetallic aluminium compound, or a mixture of two or more such compounds. The materials constituting the improved beams (18) have relatively high melting points, exhibit fewer primary slip systems than FCC crystalline structures, are etchable by the same or similar etchants and procedures used to etch aluminium and aluminium alloy, and are stronger and experience less relaxation than aluminium or aluminium alloys. Accordingly, the improved beams (18) exhibit increased strength, and decreased relaxation without requiring significant or radical deviations from the typical processing steps employed to produce the otherwise unaltered device. <IMAGE>

IPC 1-7

G02B 26/08

IPC 8 full level

G02B 26/08 (2006.01)

CPC (source: EP KR US)

G02B 5/00 (2013.01 - KR); **G02B 26/0841** (2013.01 - EP US)

Citation (search report)

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EP 95117915 A 19951114; DE 69529880 T 19951114; JP 29456895 A 19951113; KR 19950040973 A 19951113; TW 84111988 A 19951114; US 33936394 A 19941114